

01484100 BEAVERDAM BRANCH AT HOUSTON, DE

Lower Delaware Basin
Broadkill-Smyrna Subbasin

LOCATION.--Lat 38°54'20.8", long 75°30'45.9" referenced to North American Datum of 1983, Kent County, DE, Hydrologic Unit 02040207, on left bank 15 ft upstream from culverts on State Highway 384, 0.8 mi south of Houston, and 1.2 mi upstream from Blairs Pond and mouth.

DRAINAGE AREA.--3.02 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1958 to current year.

REVISED RECORDS.--WDR MD-DE-84-1: 1981, 1983 (M).

GAGE.--Water-stage recorder, crest stage gage and concrete control; timber control prior to Nov. 8, 1979. Datum of gage is 35.67 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good below 170 ft³/s and fair above except those for estimated daily discharges (backwater), which are poor. Diversion for irrigation from about 150 acres located upstream from station during some years, mainly during the months of June, July, August, and September. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location. U.S. Geological Survey satellite collection platform at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 1	0815	95	4.13
Apr 17	0330	40	3.47
Aug 28	0145	*363	*5.57
Sep 8	1600	131	4.40

Minimum discharge, Unknown.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	52	2.5	2.2	1.8	3.2	4.9	4.3	3.4	2.2	1.6	e0.37	4.9
2	6.4	2.7	1.9	2.3	8.0	3.6	3.9	3.3	2.1	1.4	e0.44	4.7
3	3.9	2.5	1.8	2.0	4.5	3.3	3.8	3.3	2.1	1.5	e0.55	4.4
4	4.8	3.9	1.8	1.8	3.9	3.2	3.8	4.4	2.1	1.4	e0.54	4.2
5	4.1	3.6	1.8	1.8	4.0	3.2	3.8	3.8	2.1	1.0	e0.65	4.1
6	4.0	2.6	1.7	1.8	3.8	5.7	3.5	3.4	2.1	0.90	e0.65	4.4
7	3.6	2.7	1.7	1.8	3.7	7.1	3.3	3.3	2.0	0.81	e0.64	4.3
8	3.2	2.8	1.6	1.8	3.5	4.3	3.4	3.2	1.5	2.8	e0.49	71
9	3.1	2.5	1.6	1.7	3.2	4.1	3.5	3.1	1.2	5.5	e0.48	36
10	3.0	2.4	1.6	1.7	3.3	4.6	3.4	3.1	1.6	3.1	e0.54	12
11	3.3	2.4	1.6	1.7	3.2	6.5	3.4	3.0	1.9	e1.9	e0.58	8.2
12	3.1	2.3	2.5	1.8	3.2	4.5	3.8	3.0	2.0	e1.2	e0.59	7.1
13	3.0	2.2	2.9	1.7	3.2	4.1	4.1	2.9	1.9	e0.99	e0.63	6.4
14	3.3	2.1	2.0	1.6	3.2	3.9	3.6	3.3	1.8	e0.79	e1.0	5.9
15	3.5	2.1	1.9	1.6	2.9	3.8	3.5	3.1	1.8	e0.75	2.0	5.6
16	3.1	2.2	1.8	1.6	2.9	5.5	6.5	3.0	1.7	e0.71	2.2	5.2
17	2.8	2.2	1.8	1.5	3.0	4.5	18	3.0	2.0	e0.82	e0.85	5.0
18	3.0	2.0	1.7	3.7	3.0	4.3	5.3	2.9	2.1	e0.67	e0.50	4.9
19	3.0	2.0	1.8	2.6	2.9	4.0	4.6	3.0	2.1	e0.51	0.61	4.8
20	3.1	2.0	1.7	2.2	2.8	3.9	4.3	3.1	2.1	0.34	0.63	4.8
21	3.0	2.0	1.7	2.2	2.9	4.6	4.0	2.9	2.6	e0.49	0.46	4.7
22	2.8	2.0	1.7	2.0	2.9	4.4	3.9	2.8	3.1	e0.68	0.44	4.6
23	2.7	2.0	1.7	2.0	2.8	4.5	4.1	2.8	2.8	e0.52	0.38	5.2
24	2.5	1.9	1.7	1.9	2.9	5.7	3.8	2.7	2.6	e0.37	0.36	4.8
25	2.7	2.0	1.7	2.0	3.9	4.6	3.8	2.6	1.9	e0.89	1.6	4.5
26	2.5	2.0	1.8	4.2	3.1	4.3	3.6	2.5	1.6	e1.4	1.1	4.3
27	4.2	1.9	1.8	5.3	2.9	4.1	3.5	2.4	1.3	e0.74	52	4.2
28	3.9	1.8	1.6	3.9	4.2	3.9	3.6	2.4	1.5	e0.48	176	4.1
29	2.6	1.7	1.6	3.5	---	3.8	3.5	2.4	1.5	e0.28	19	4.0
30	2.5	1.8	1.6	3.3	---	3.9	3.4	2.2	1.8	e0.31	7.6	4.0
31	2.4	---	1.8	3.2	---	4.1	---	2.2	---	e0.31	5.8	---
Total	151.1	68.8	56.1	72.0	97.0	136.9	131.0	92.5	59.1	35.16	279.68	252.3
Mean	4.87	2.29	1.81	2.32	3.46	4.42	4.37	2.98	1.97	1.13	9.02	8.41
Max	52	3.9	2.9	5.3	8.0	7.1	18	4.4	3.1	5.5	176	71
Min	2.4	1.7	1.6	1.5	2.8	3.2	3.3	2.2	1.2	0.28	0.36	4.0
Cfsm	1.61	0.76	0.60	0.77	1.15	1.46	1.45	0.99	0.65	0.38	2.99	2.78
In.	1.86	0.85	0.69	0.89	1.19	1.69	1.61	1.14	0.73	0.43	3.45	3.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.98	2.58	3.65	4.48	5.39	6.34	5.58	4.31	3.18	2.64	2.45	2.15
Max	5.58	11.1	19.3	10.7	16.2	18.0	11.0	10.5	9.33	16.8	9.38	10.1
(WY)	(2010)	(2010)	(2010)	(1978)	(1998)	(1994)	(1983)	(1984)	(2003)	(1975)	(1967)	(1960)
Min	0.17	0.31	0.48	0.57	1.06	1.57	1.90	1.77	1.22	0.42	0.28	0.11
(WY)	(2008)	(2008)	(1966)	(1966)	(1966)	(2002)	(1985)	(2006)	(1986)	(1977)	(2007)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1958 - 2011	
Annual total	1,813.20		1,431.64			
Annual mean	4.97		3.92		3.69	
Highest annual mean					7.24	2010
Lowest annual mean					1.20	1966
Highest daily mean	52	Oct 1	176	Aug 28	176	Aug 28, 2011
Lowest daily mean	0.28	Jul 5	^e 0.28	Jul 29	^a 0.00	Jul 28, 1977
Annual seven-day minimum	0.41	Jul 2	0.39	Jul 28	0.06	Jul 19, 1977
Maximum peak flow			^b 363	Aug 28	^b 363	Aug 28, 2011
Maximum peak stage			5.57	Aug 28	5.57	Aug 28, 2011
Instantaneous low flow			Unknown		^a 0.00	Jul 28, 1977 ^c
Annual runoff (cfsm)	1.64		1.30		1.22	
Annual runoff (inches)	22.33		17.63		16.62	
10 percent exceeds	9.5		4.7		6.7	
50 percent exceeds	2.6		2.8		2.8	
90 percent exceeds	0.88		0.82		0.80	

^e Estimated.

^a Result of pumpage for irrigation.

^b From rating curve extended above 170 ft³/s.

^c July 18-30, 1977.

